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ABSTRACT

Two new directions for strengthening the evaluation and research efforts of school districts are discussed. The first direction is in developing a methodology for clarifying and systematizing formative evaluations; the second is in improving the attitude survey capabilities of school districts. (DB)

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PUTTING THE RESEARCH INTO SCHOOL DISTRICT RESEARCH AND EVALUATION EFFORTS

TM 001 478

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INTRODUCTION

Private contractors can contribute very little to school district evaluations and worse yet, there is very little to which contributions could be made. Within the constraints imposed by the present organization of schools and the current methods of funding, the state of the art in school district research and evaluation is at a low level. Although the fiscal, theoretical and political pressures operating upon and within districts all clearly point toward the need for a rigorous and sustained research and evaluation effort in the schools, the response to these challenges has been less than satisfactory.

External contractors and school personnel are equally culpable for these failures. Increased participation of corporations, universities and individual consultants in the evaluation efforts of school districts will, despite and perhaps because of their externality, only prolong a condition that needs radical changing. However, this paper is not intended to be an obituary for the last and best attempt to bring reason to bear upon educational problems. Rather, it is a prescription for what might be done, once the problem has been explicated and easy solutions - such as the purported objectivity of the educational auditor or the presumed expertise of the private contractor - have been dismissed.

PROBLEM DEFINITION

The problems with current educational evaluation can be traced to two major sources: conceptual and administrative. The complexity and pervasiveness of these sources are such that no external evaluator or auditor can even begin to provide or suggest effective remedies.

Conceptually, the applications of evaluation strategies and techniques lag far behind the models developed in the universities (Provos,1969; Scriven, 1967; Suchman, 1969). Many competent social scientists have tended to remain aloof

from applied educational evaluation, feeling that the lack of control over the variables and the political controversy surrounding accountability render the activity meaningless. Those researchers who have entered the field, regardless of the source of their institutional support, have brought more heart than wisdom to the enterprise. As a consequence, they have reinforced the practitioner's notion that there is one evaluation system, one evaluation ethos, and one payoff from evaluation. Educational evaluations continue to be constricted by the rigid laboratory model; insensitive to potential of - indeed, need for - ad hoc and intuitive approaches; and always pointed toward useful information, as defined by the school business agent.

In fact, evaluation is not a single concept so that one approach constitutes the universe. If one were to state the basic components of a comprehensive evaluation, there would be general agreement as to their nature. Statements of objectives, the documentation of processes, the specification of components, the identification of outcomes, the description of the environment, the determination of costs and provisions for unanticipated outcomes are the seven components most frequently mentioned. If these elements were consistently a part of evaluation in school districts, then the term evaluative research would be more appropriate.

In applied settings, the experimental model cannot be static and the outcomes and their interpretations are rarely unambiguous. Evaluation then becomes an iterative process whereby successive approximations of the ultimate objectives are continually developed, refined, and questioned anew. In this approach, intuition is as informative as theory, targets of opportunity are as fruitful as pre-determined strategies, and the ambiance is as influential as the treatment. This approach to educational research is not anti-scientific nor is it non-rational.

It does, however, recognize the importance of situational variables in working toward improved programs that may not be generalized across schools or districts.

If our evaluation priorities were realized so that evaluative research were the rule rather than the exception in school districts, external contractors would have very little to contribute to the schools for several reasons. Evaluative research takes time, years, if done properly, and it is senseless for districts not to hire the expertise rather than contract for it. Second, if the environment is as important as has been suggested, external evaluators would be inadequately informed about these important variables. Finally, if evaluative research is as much a point of view as it is a system, then it ought to be instilled throughout the school system. Too often, evaluation is seen as something that the planners "do" and the administrators "use." Evaluation should be a systemic perspective; its methods and results should become as important to the practitioners as to the administrators and planners. Unfortunately, the use of external evaluators only reinforce the former, overly rigid conceptualization of the role of evaluation.

Administratively, in those few districts where research and evaluation has been institutionalized, the divisions have been assigned a staff function. In this staff capacity, the personnel report either to an assistant superintendent or, in smaller districts, directly to the superintendent. Because districts are organized according to their operating units and special programs (Federal, E.S.E.A., Title I, etc.), there evolves an institutionalized separation between the planning-research-evaluation and the teaching-learning functions.

In part, this administrative separation can be attributed to the rigid adherence to the laboratory research concept discussed earlier in this paper. But even if the concept of evaluation in applied settings had been more flexible

and comprehensive, there are strong organizational pressures that would prevent its implementation. The most important of these is the scarcity of qualified research and evaluation personnel. Schools of education have taken over the training function, and their criteria and certification have by necessity been adopted by the school districts. The requisite courses in tests and measurement, research design, statistics, etc. now must be taken from a university so that one may become an educational researcher. The universities have limited resources; consequently the supply of such people is limited. In turn, when school districts hire their research personnel they are put in staff positions so that their talents, in theory, can be available to everyone.

In reality what happens is that these people are then called upon to fight a continual series of brush-fires, most of which have very little to do with evaluation or research. They are called upon because they are quite capable, fairly logical and articulate; and, after all, they are not really <u>doing</u> anything except planning anyway. The deterioration is rapid. As time is spent on other tasks deemed critical by the superintendent, the research and evaluation staff is increasingly separated from the operational staff. Finally, evaluation becomes something that is done once a year to satisfy some reporting requirement imposed by some obscure source.

Enter the external contractor who, for a price, will do the work to satisfy that report. And the work is tedious, expensive, and probably not satisfying to anyone. The original objectives of the program have to be stated and clarified again, for no one from the research and evaluation staff was available when principals and teachers planned the program. The treatments have long since been forgotten, because the key teachers have left and process monitoring was stopped. The data are in the janitor's supply closet, waiting to have the children's names

put on the instruments because they forgot to do that during the pre-testing. Finally, the post-testing is all set up for the contractor except for grade twelve which will be in Washington on their class trip. Through a variety of twists of the imagination that take him to, but not beyond, the boundary of perjury, the contractor produces the report and the requirement has been met. No one in the school district who cares about the quality of evaluation is satisfied, but there are more brush-fires to be put out so there is not enough time to worry about the problem. The need will arise next year and the contractor will probably be rehired because "he can do the job."

As long as school districts are organized so that the research and evaluation people are treated as scarce resources that must be in a staff capacity, this depressing senario will be repeated. The planning, research, development and diffusion functions will be neglected and probably dropped. Only the evaluation function will then remain and it will at best be performed mechanistically. The operating staff and the clients - teachers, students and parents - will look upon evaluation as something done by <u>them</u> to <u>us</u>. Of course, contractors may profit from this; but in the long run education loses.

To counter this tendency, it is proposed that indigenous research and evaluation resources be increased. However, along with this increase should come the administrative commitment of the staff to specific programs for their total life span. More resources that are used in the same old manner are not going to improve educational evaluations qualitatively. The time-consuming, institutional-maintenance demands of the system are great. The personnel of the research and evaluation groups will never satisfy these demands as long as they are in a purely staff position. Even if it means that some programs do not get evaluated, research and evaluation priorities must be established and specific individuals assigned

to the programs of interest. These individuals, it is suggested, should become participant-observers in their programs, even to the point of teaching classes. Furthermore, while they learn about the realities of the schools from their peers and from direct experience, they should look upon their role as one that is overtly pedagogical. That is, the perspective and the few techniques that are connoted by the term evaluative research are to be taught to the operating staff as the program progresses. Instilling more of the line responsibilities into research and evaluation groups is one way to initiate a process in which the planning, research, development and evaluation functions are perseverated throughout the system. Obviously, external evaluation contractors cannot contribute to this necessary process.

NEW DIRECTIONS

If research were to become an integral part of school district evaluation, the opportunities for extending the state of the art would be limitless. There are two areas, however, in which development would have a particularly high priority because of their importance to applied evaluation. The first is in developing a methodology for clarifying and systematizing formative evaluations. The second is in improving the attitude survey capabilities of school districts. It is not presumed that research activity in two areas will solve the problems of education. However, it is suggested that work in these areas will increase our ability to ask questions that are at least pertinent to the problems.

FORMATIVE EVALUATION IMPROVEMENT

One of the principal problems in conducting formative evaluations of complex problems is the inherent difficulty of organizing the wealth of material in such a way as to throw light directly upon the issues of interest. Thus the first step in formative evaluation improvement would be the examination of the agreed-

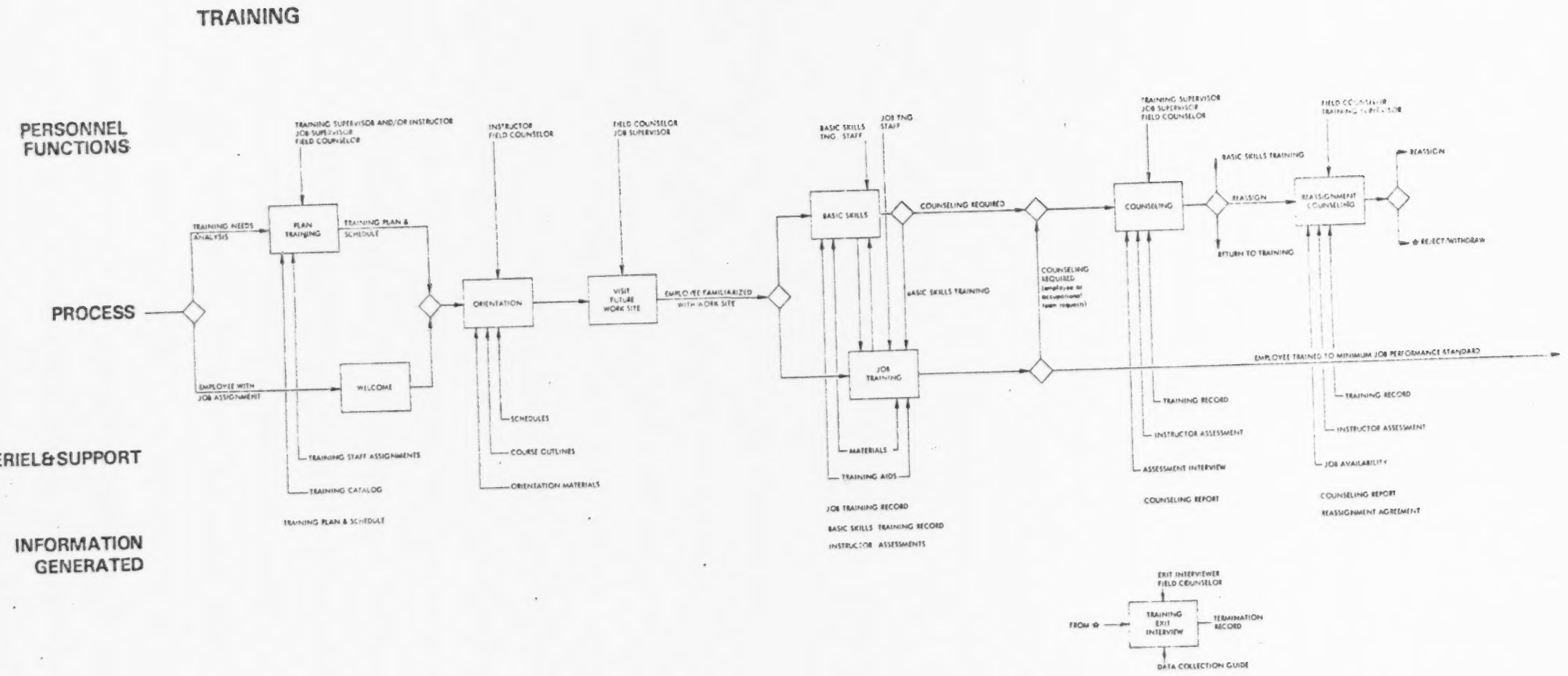
upon evaluation objectives and the explication of those which relate to the formative evaluation.

This explication will involve reducing the general objectives to specific categories into which information will be classified. This categorization step is necessary to avoid the frequently encountered program evaluation situation in which a large amount of data and great piles of documents are accumulated with no clear plan for the use of the data. It then becomes necessary to reduce the information on an a posteriori basis to some sensible format. In that process, it is usually found that the data are not comparable among projects, some of the data are redundant, or that important evaluation objectives have been ignored and the data were not collected. It is believed that a great deal of time can be saved and comprehensive evaluation coverage can be insured by structuring in advance the content categories in which information will be collected and maintained for the formative evaluation.

Even with a thorough planning function built into school evaluations, one of the primary difficulties in conducting formative evaluation is the formating of information in such a way as to show systematically the interaction effects of the various program components. It is proposed that this problem would be overcome by the development and implementation of the System Block Diagram approach to overall program concepts for each of the projects in the program. This technique allows one to describe the various components and their relationships in the overall program in such a way that every one concerned can examine the description, correct it where there is an error, change it as programmatic changes are introduced, and understand the relationship among the various activities within each component. Figure 1 illustrates how such a system block diagram can be used to describe the components of a program. This example is taken from a previous project in

FIGURE 1

SYSTEM BLOCK DIAGRAM PROCESS



which Planar personnel had the responsibility for describing various components in an employee recruiting and training program. The component illustrated has to do with the training function.

Supporting the diagrammatic description of each project would be a series of back-up sheets giving a narrative description of the specific details underlying each activity shown in the rectangular boxes on the diagram. In the example presented, the back-up narratives described the processes by which the instructor and the field counselor provide orientation to the new employees, detailing the materials used; all course outlines that might be used; the schedule followed; qualifications of the instructor and the field counselor; and a statement of the specific goals and objectives of the orientation section. In school districts this might be analogous to the orientation of the parents to a school-wide program. It can be seen that the availability of the diagrammatic descriptions together with the backup material can provide a uniform way of examing the various programs so as to pinpoint communalities and differences. If it were compared with a "model" project, for example, it would facilitate the comparison of objectives and components and the identification of disparities between the actual projects and the "model" as well as among projects.

Both in the diagramming and in the descriptive material supporting the diagram there would be special emphasis on the mechanisms provided for feeding back information for program improvement and quality control. These feedback loops can be shown in the diagrams and specific techniques for implementation of feedback mechanisms would be detailed in the written descriptions.

Additional documentation which would support the formative evaluation would include material bearing on environmental factors in the situation which tended to foster successful development of the programs or to hinder their orderly

development. These would include minutes of meetings, public correspondence, newspaper or other media coverage, and the information culled from on-site interviews of the staff and community. In addition, they would include the direct experience observations of the research staff member assigned to the evaluation as a participant-observer.

The availability of the program descriptions and the iterative comparison of such program descriptions against the program objectives will provide a continuing opportunity to review the congruence of program elements and to modify processes and/or components as necessary. Formative evaluation is in its infancy and is far from being a science in any sense of the word. Unless and until the data are presented in a clear and detailed manner, all of the techniques in the evaluator's kit will not begin to address the salient questions. System Block Diagrams do clarify the data by displaying the key program components in their natural sequence. The back-up narrative material provides the essential contextual information. Taken together, these data are useful to the evaluator simply because they are organized.

ATTITUDE SURVEY IMPROVEMENT

Because educational issues are increasingly brought to the political forum and because taxpayers' revolts are becoming more frequent, school people are ever more dependent upon the timely and accurate assessment of attitudes toward education. In large school districts, it is suggested that the only way educators can be attuned to public opinion while remaining aloof from becoming a captive of a vocal minority is to develop systematically an internal survey capability.

Such a capability, developed over time by the research and evaluation staff, would at the same time have obvious programmatic benefits. One of the reasons why schools are judged by standardized test scores is that they are often the only

credible data to which the public has access. Because of a lack of emphasis upon survey research, schools have never been able to use, in either public relations or program evaluation, attitudinal data that have great promise. Both as outcome and intervening variables, attitudinal information would be restored to its important position, if the instrumentation, collection and analysis functions were treated systematically.

The most productive role systems oriented social scientists can play in supporting a school district's planning and evaluation activities in this realm is through the development, refinement, and field testing of methods and techniques for the conduct of analyses in support of decision making activities. These methods and techniques could, of course, cut across many fields ranging from highly sophisticated computer modeling and simulations to highly specific studies of the relative impact of various incentives for the enhancement of academic performance. The quality of decisions is, of course, directly related to the quality of information available to decision makers. What is here proposed is that a program of research and development be undertaken, the objective of which is the ultimate production of survey instruments and analytical techniques which have the following characteristics:

1. Have been shown to be highly reliable, i.e., to produce essentially identical results when administered successively to the same sample or to comparable samples.
2. To be sensitive indicators of the direction and strength of a wide variety of opinions, attitudes and feelings of school district personnel.
3. Are valid, i.e., can be shown empirically to measure variables which relate significantly to behaviors important to the school district.

Surveys designed to tap such variables are, of course, in widespread use throughout school districts. Such surveys have been, and will continue to be, useful sources of relevant background information. It is suggested, however, that the typical survey of this type is not designed so as to optimize the

probability of producing the most useful information. This is partly a function of the fact that most of these studies are conducted on an ad hoc basis, usually by personnel who have limited access to or experiences with the most sophisticated techniques. In addition, it is seldom possible in one-time studies of this type to collect validation data on a systematic basis and to accumulate a body of such validation data on the same scales over extended periods of time. All of these factors mitigate against significant improvement in the state of the art with respect to surveys designed to produce useful information for decision makers.

The primary methodologies involved would be the conduct of both cross-sectional and longitudinal surveys in a variety of content areas and the analysis of responses obtained for relationships with behavioral criteria. In the course of these surveys all promising techniques of data collection through interviews and observations, all promising procedures for reducing data to numerical values through scaling, all likely statistical procedures for data processing, and all likley techniques for synthesizing and reporting of results will be systematically evaluated. Thus, over a period of time the optimum configuration of data collection, processing, and analysis will be developed and the limits of reliability and validity will be demonstrated.

What is proposed is a program of research and development. This program would include the conduct of several studies each of which would be designed to capitalize upon the findings of previous studies and to advance the state of the art of surveying within the educational setting. Since the specific studies to be undertaken would be predicated on the needs of the district and on previous findings, it is impossible to present a definitive program. It is however, clear

that the typical study would proceed generally as displayed in Figure 2. The major steps would be as follows:

The first step would be to identify the problem area in which important policy decisions can be expected to be required in the near future.

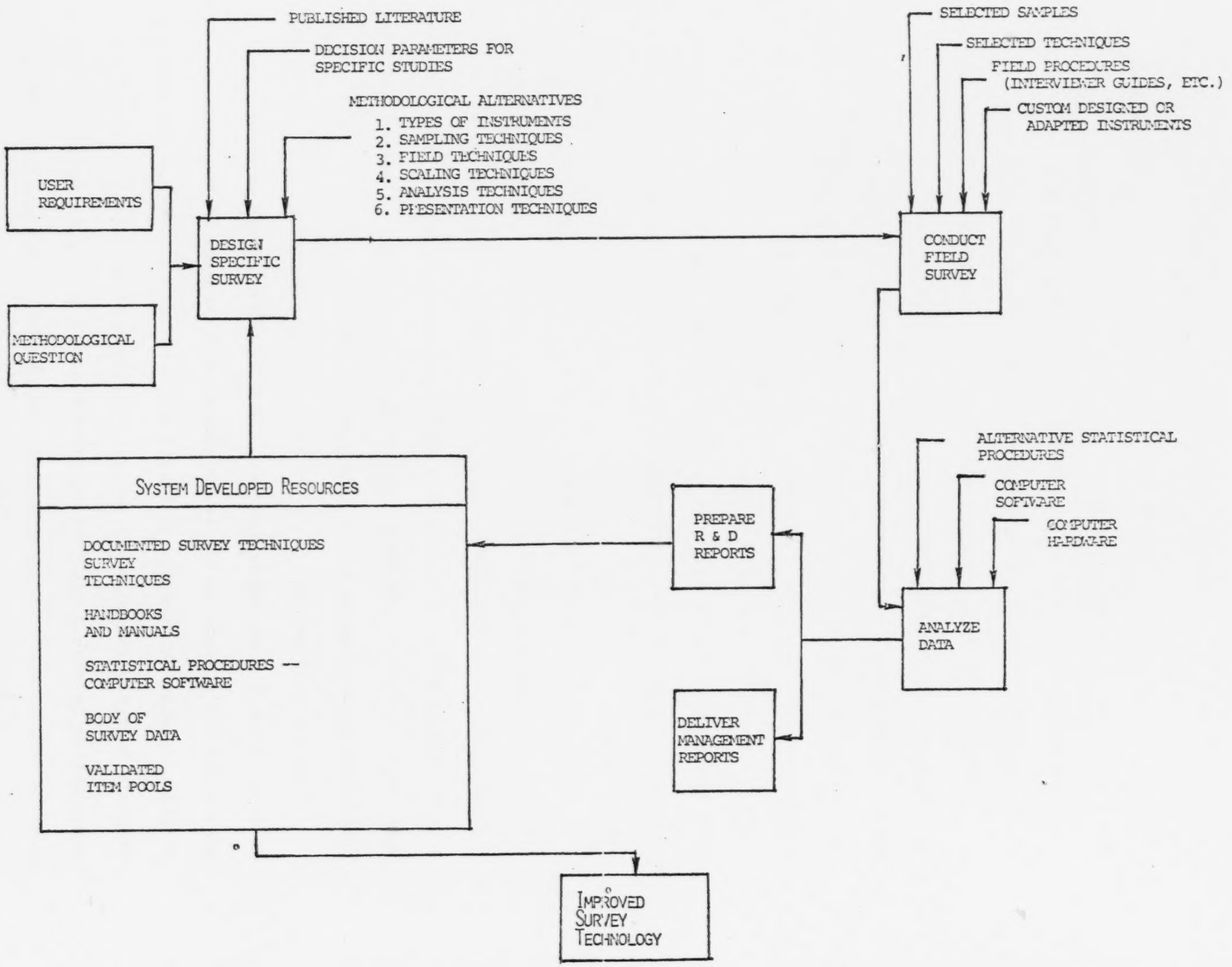
Second would be the identification of those district sub-populations whose opinions, attitudes, and feelings are important inputs to the decisions to be made. These might be categories of administrators or teachers, age groups, groups with differing lengths of employment, men vs. women, etc. Once these populations of concern are identified and described, appropriate sampling techniques would be employed to derive the samples to be utilized. In every case the samples should be large enough to provide useful data for decision makers and to provide the capability for analyses for the refinement of method and technique.

Third, the extensive literature on survey research would be reviewed to identify all possible techniques for data collection which show promise in the type of study to be conducted. From a methodological point of view it is important to over-sample rather than under-sample techniques and methods to be utilized. Thus, there would be a minimum likelihood of overlooking techniques which may contribute significantly to the precision of results.

Fourth, field surveys would be undertaken with samples of the populations selected using the chosen techniques. It will normally not be necessary to administer all subsets of all techniques to all subjects in the samples. Where relatively large samples are available and necessary subsets of the item pools properly counterbalanced to allow later statistical treatment, the surveys can be administered in such a way that no one subject is unduly burdened. Powerful computerized statistical techniques are now available for dealing with data cells

FIGURE 2

SURVEY CAPABILITY DEVELOPMENT PROCESS



with different numbers of cases in the analysis phases. While the exact details of each field survey will vary with the content, the respondents involved, and the specific purposes of the survey, it seems clear that survey facilities and procedures should be comparable to those which would be utilized by the school district under normal circumstances rather than those employing highly sophisticated and unusually well-trained survey personnel. This is necessary to insure that findings with respect to methodology and technique will be generalizable to normal survey operations to be conducted after this developmental effort is completed. Occasionally, of course, it will be necessary for project personnel to conduct small sample studies with highly specialized survey personnel in order to resolve especially complex methodological problems.

Next, survey results will be subjected to a variety of analytical and data processing techniques. These will be considerably more detailed and varied than would be the case in a normal survey situation because one of the goals of the project is to evaluate empirically the relative merits of various proposed alternatives for such data treatment.

Finally, survey results will be synthesized and presented in a variety of report formats. The goal here will be to evaluate the effectiveness of various alternative techniques for displaying survey results to the public or to decision makers. It is likley that the quality of decisions varies not only as a function of the accuracy of data available but to some extent as a function of the format in which the information is presented. Certain data may be most understandable in numerical form - others in pictorial displays and still others in combinations supported by prose summaries. Again, one of the goals of the project will be systematically to vary data display techniques and to obtain empirical (at least judgmental) evidence as to the relative value of the alternatives.

The methodological implications of each particular survey would then be studied in detail and be made a part of the overall body of information the program is accumulating. This will involve examining the outcomes (particularly those relating to technique) in light of findings from similar surveys which are part of the overall program. It is naturally important that specific surveys involve subject matter areas of interest to the district at the time. Thus, the program will have the double benefit of working toward the ultimate optimization of survey technology and of providing, on a continuing basis, live data to those responsible for making decisions while the program is underway.

CONCLUSION

Evaluative research as a world-view is too important to be left to the evaluators. The narrow focus upon externality as the only evaluative perspective, the emphasis upon formal analytical techniques rather than logical design, and the tendency to let evaluation for merit subsume the planning and research functions all perpetuate an unhealthy climate in which some evaluation contractors prosper. It is proposed that new infusions of money along with a broader definition of evaluation and an administrative restructuring of evaluation activities hold the promise of changing the system. However, it takes time to make these changes and they are best done internally. External contractors can only siphon off needed money while using whatever skill they have in perpetuating the inadequate, fragmented efforts of the past.

Two new directions for strengthening the evaluation and research efforts of school districts have been discussed. Systematic approaches to improving formative evaluation and attitude survey techniques will allow school districts to ask the

right questions in educational evaluation. By reordering their priorities and their administrative procedures, school districts would be able to put the research back into research and evaluation. Certainly no external group or individual is going to do this for the schools.